

REMARKS/ARGUMENTS

Before the present Amendment, Claims 1-14 were pending, with Claims 1 and 13 being the only independent claims. In the present Amendment, pending Claims 1-14 have been amended so that the language is in accordance with U.S. patent practice and to clarify the nature of the claimed invention, and Claims 15-17 have been added.. After the present Amendment is entered, Claims 1-17 will be pending, with Claims 1, 13, and 16 being the only independent claims. Reconsideration and withdrawal of the rejections are requested on the basis of the foregoing amendments and following remarks.

In the Office Action dated 14 April 2003, the following objections and rejections were raised:

- I. The Abstract was objected to for a formal matter;
- II. The specification was objected to for formal matters;
- III. Claims 1-14 were objected to for formal matters;
- IV. Claim 6 was rejected under 35 U.S.C. §112, second paragraph, as indefinite;
- V. Claims 1, 2, 4, 7, 8, 13, and 14 were rejected under 35 U.S.C. §102(b) as anticipated by *Philips* (WO 00/24314, hereinafter *Philips*); and
- VI. Claims 3, 5, 6, and 9-12 were rejected under 35 U.S.C. §103(a) as being unpatentable over *Philips*.

I. Objection to the Abstract

The Examiner objected to the Abstract because of the use of legal phraseology, in particular the use of the term "means" in line 2. It should be noted that the term used in line 2 of the Abstract was "by means of", which is a phrase commonly used in speech and writing, and is not considered a "legal" phrase. Nevertheless, the originally-filed Abstract has been replaced with an amended Abstract which is believed to be more clear and concise. Withdrawal of the objection is respectfully requested.

II. Objection to the Specification

The Examiner objected to the specification because it was missing section headings. In addition, the Examiner objected to the references on page 1 to pending claims. In response, a substitute specification (attached) was created, in which section headings have been added and the references to claims have been removed, as well as various grammatical changes and fixes of the translation (as can be seen in the marked-up copy of the substitute specification). Withdrawal of the objection is respectfully requested.

III. Objection to Claims 1-14

The Examiner objected to Claims 1-14 because each step of the method claimed in Claim 1 was not appropriately separated (and likewise each element in apparatus Claim 13 was not appropriately separated) pursuant to 37 CFR §1.75(i). Both Claim 1 and Claim 13 have been amended to clearly demarcate (by indentation) the various steps and elements in each. Withdrawal of the objection is respectfully requested.

IV. Rejection of Claim 6 under §112, second paragraph

The Examiner rejected dependent Claim 6 under 35 USC §112, second paragraph, for reciting both a broad range and a narrower range within the same claim, thus rendering said claim indefinite. In response, the narrower range has been deleted from dependent Claim 6 and placed in newly-added Claim 15, which depends from Claim 1. It is believed that both claims are sufficiently definite. Withdrawal of the objection is respectfully requested.

V. Rejection of Claims 1, 2, 4, 7, 8, 13, and 14 under §102(b)

The Examiner rejected independent Claims 1 and 13, as well as Claims 2, 4, 7, 8, and 14 dependent thereon, under 35 USC §102(b) as anticipated by *Philips*. In response, the claims of the present application have been amended to clarify the nature of the present invention.

Philips describes an X-ray device for performing tomography on a patient. As seen in FIG. 5 of *Philips*, the X-ray device has a movable X-ray source 6 on one side of a patient and a corresponding movable X-ray detector 5 on the other side of the patient. The X-ray source 6 moves through an angular range (with X-ray detector 5 moving through a reciprocal angular range on the

other side of the patient) in order to take a tomographic image of a layer within the patient. However, *Philips* is focused on a description of the physical device and provides no discussion of the appropriate angular range of the X-ray source 6 and X-ray detector 5, or the amount of projection images which must be taken in order to form a single tomographic image, or the process by which the final tomographic image is formed.

The present application describes how prior art systems required that the X-ray source go through an angular range of at least a 180° in order to generate a tomographic image. Furthermore, prior art systems required more than 100 projection images be taken in order to generate one tomographic image. Further still, an intermediary three-dimensional data set was required in prior art systems in order to form the final tomographic image.

By contrast, the invention claimed in independent Claims 1 and 13 of the present application does *not* require an intermediary three-dimensional data set to form the final tomographic image, but rather generates it directly from the projection images themselves. Furthermore, those projection images are taken in an angular range of less than 180°.

At least because of the limitations missing from *Philips* as presented in the last paragraph, independent Claims 1 and 13 are patentable over *Philips*. Withdrawal of their rejection is respectfully requested. Furthermore, at least because of their dependence on independent Claims 1 and 13, which are believed to be in condition for allowance, dependent Claims 2, 4, 7, 8, and 14 are also believed to be in condition for allowance. Withdrawal of their rejection is also respectfully requested.

VI. Rejection of Claims 1, 2, 4, 7, 8, 13, and 14 under §102(b)

The Examiner rejected dependent Claims 3, 5, 6, and 9-12 under 35 U.S.C. §103(a) as being unpatentable over *Philips*. At least because of their dependence on independent Claim 1, which is believed to be in condition for allowance, dependent Claims 3, 5, 6, and 9-12 are also believed to be in condition for allowance. Withdrawal of their rejection is also respectfully requested.

The Addition of Claims 15-17

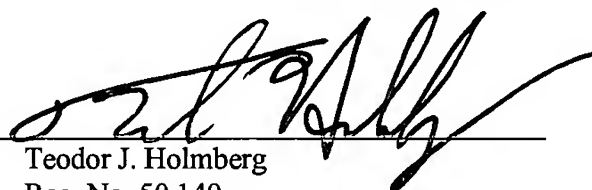
Dependent Claim 15, discussed above, was added in the present Amendment: it does not comprise new matter, and is believed to be in condition for allowance because of its dependence from independent Claim 1, which is in condition for allowance.

Independent Claim 16 was added in the present Amendment and does not comprise any new matter. Claim 16 recites a method in which the X-ray source and the X-ray detector are displaced over a less than 180° angular range around an object being examined in order to acquire less than 100 X-ray projection images: at least because the cited prior art neither teaches nor suggests such a method, newly-added Claim 16 is believed to be patentable over the cited prior art, and is thus in condition for allowance. Claim 16's allowance is respectfully requested.

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